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10/559,927

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Andreas Welsch

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01/07/2009

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EXAMINER

WALBERG, TERESA J

ART UNIT

PAPER NUMBER

3744

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/559,927 | Applicant(s) WELSCH, ANDREAS | |
| | Examiner Teresa J. Walberg | Art Unit 3744 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11, 14, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thome et al (6,290,473) in view of Plant (5,649,587).

Thome et al disclose a fluid cooling device including (see Fig. 3) a drive motor (10), a rotatable fan wheel (12) driven by the drive motor (10), a first fluid pump (14) driven by the drive motor (10) and mounted on a shaft line jointly with the fan wheel (Fig. 3), a reservoir tank (16) of plastic material containing a fluid conveyable into a working circuit that heats the fluid in operation of the working circuit (col. 1, lines 46-52), parts of the reservoir tank (16) at least partially enclosing the fan wheel (12) and forming a fan housing (Fig. 1), the tank (16) having a bottom side trough part and an upright side trough part (24) seated on and extending vertically on the bottom side trough (Fig. 1), the bottom side trough and upright side trough being integrally connected (Fig. 1), the bottom side trough having a longitudinal extension equal to at least an overall length of a combination of the drive motor and the first pump (Fig. 1), a heat exchanger (20) receiving and cooling the fluid returning to the reservoir tank (16) from the working circuit (col. 1, lines 46-52), the tank having plural tank chambers (Fig. 5).

Thome et al do not disclose the bottom side trough and upright side trough forming a hollow collar in which the fan wheel is rotatably mounted and do not disclose a second fluid pump driven by the motor drive.

Since Thome et al teach the use of a motor to drive both a fan and a pump, it would have been obvious to one of ordinary skill in the art to use the motor to drive additional pumps, the motivation being to reduce the number of parts needed to operate the device.

Thome et al do not disclose the first fluid pump being located coaxially between the drive motor and the fan wheel. However, it would have been obvious to one of ordinary skill in the art to position the items to be driven by the drive shaft in any desired order.

Plant discloses a combined fan shroud and fluid tank including a bottom side trough and upright side trough forming a hollow collar in which the fan wheel is rotatably mounted. See Fig. 5 and col. 2, lines 59-62.

It would have been obvious in view of Plant to provide a bottom side trough and upright side trough which a hollow collar in which the fan wheel is rotatably mounted in the cooling device of Thome et al, the motivation being to enable easier assembly of the device.

3. Claims 12, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thome et al (6,290,473) in view of Plant (5,649,587) and further in view of Albright et al (6,871,697).

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Thome et al in view of Plant disclose a fluid cooling device having the claimed structure, including first and second fluid tanks (44 and 46 in Fig. 4 of Plant), with the exception of the hollow collar delimiting a first opening covered by and facing the heat exchanger, the first cross section area being larger than the second cross sectional area facing the drive motor and fan wheel, the heat exchanger including first and second heat exchangers. It is noted that Plant does not discuss the presence of pumps to move fluids in or out of the chambers. However, such pumps would necessarily be provided to enable the device to function.

Albright et al discloses a hollow collar (38A, 40A) delimiting a first opening covered by and facing the heat exchanger (46, 48, 50), the first cross section area being larger than the second cross sectional area facing the drive motor and fan wheel (Fig. 9), the heat exchanger including first and second heat exchangers (46, 48, 50).

It would have been obvious in view of Albright et al to provide the hollow collar delimiting a first opening covered by and facing a heat exchanger, the first cross section area being larger than the second cross sectional area facing the drive motor and fan wheel, the heat exchanger including first and second heat exchangers in the cooling device of Thome et al in view of Plant, the motivation being to provide smoother air flow and a more compact device.

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4. Applicant's arguments filed 29 September 2008 have been fully considered but they are not persuasive.

Applicant argues that the Thome patent discloses the motor, fan wheel, and pump arranged in that order, while the present invention requires that the motor and the pump be on the same side of the fan. However, it is considered to have been obvious to one of ordinary skill in the art to arrange the motor, fan wheel, and pump in any desired order, based on the arrangement of the other parts of the device and whatever arrangement order is considered to be most convenient.

Applicant argues that Plant does not show the bottom side trough part extending at least over the length of the drive motor and the first fluid pump. However, this structure is shown by Thome. See Figs. 1 and 3.

Applicant argues that claim 12 requires first and second openings delimited by the hollow collar. This argument is not understood, since Thome shows (see Figs 3) entrance and exit openings on either side of the fan 12 to form a flow path.

Applicant argues that claim 13 requires a first cross sectional area being larger than a second cross sectional area and tapering of the air guide surface between those openings. However, this structure is clearly shown in Fig. 3 of Thome.

Applicant argues that claim 14 requires first and second tank chambers at least partially separated from one another and states that no such tank chambers

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are disclosed or rendered obvious by the Thome and Plant patents. Plant shows the use of separate tank chambers (44 and 46 in Fig. 4) with the tanks being separated by the divider that extends down the center of the tank as shown in Fig. 5.

Applicant argues that claim 15 requires first and second heat exchangers, and that such are not shown in the cited patents. However, Albright et al was applied to show first and second heat exchangers (46, 48, 50).

Applicant argues that claim 16 requires tank openings. However, tank openings are shown by the applied references and would necessarily be provided to enable moving fluid into or out of a tank.

Applicant argues that claim 17 requires rotational molding. However, a product by process limitation is met if the structure of the device is such that it could have been made using the stated process.

Applicant argues that claim 18 requires a second pump. However, as stated above it is considered to have been obvious to one of ordinary skill in the art to use a second pump, to enable pumping of a second fluid.

Applicant argues that claim 19 requires that the trough parts be rectangular. However, Thome shows trough parts being formed using rectangular parts. See 16 and 26 in Fig. 1. It is further noted that it would have been obvious to one of ordinary skill in the art to make the parts any desired shape, based on the space into which they are to be assembled.

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Applicant argues that claim 20 requires an L shape formed by the trough parts. However, Thome shows an L shape formed by the trough parts. See Fig. 1.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Teresa J. Walberg/
Primary Examiner, Art Unit 3744

/TW/